



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,827	03/12/2004	Alfred S. Gates JR.	K-1977	8510
27877	7590	09/24/2007		
KENNAMETAL INC. P.O. BOX 231 1600 TECHNOLOGY WAY LATROBE, PA 15650			EXAMINER TURNER, ARCHENE A	
			ART UNIT	PAPER NUMBER
			1775	
			MAIL DATE	DELIVERY MODE
			09/24/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/799,827

Applicant(s)

GATES ET AL

Examiner

Archene Turner

Art Unit

1775

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 10 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-6,8-25,29 and 31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-6,8-25,29 and 31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 7/07.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

Art Unit: 1775

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With the newly added limitation to claim 1, claim is now unclear, rendering the claim indefinite.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

4. Claims 1,4-6,8,11, 29, 31 are rejected under 35 U.S.C. 102(e) as being anticipated by Ruppi (7,163,735).

Ruppi discloses the claimed alpha alumina on the claimed substrate through the claimed layers.

Art Unit: 1775

5. Claims 1-6,8-14,22-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Vuorinen et al ("characterization of...on cemented carbides").

Vuorinen et al discloses the claimed alpha or kappa alumina on the claimed substrate. It is the examiner's position that the large grains within the alumina anticipates the claimed shape.

6. Claims 8-9, 11-13,22-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakamura et al (6,565,957).

Nakamura et al discloses the claimed alumina on a substrate (table 6).

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1,2,4-6, 15-25, are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishii et al (6,333,103) in view of Ruppi et al (7,163,735) or Vuorinen et al ("characterization of...on cemented carbides").

Ishii et al discloses the claimed alpha alumina or mixture alumina layer (column 8, lines 24-28) having a claim grain size (column 3, lines 57-62) that would anticipate the claimed shape but not the claimed layers there between the said alumina and the substrate.

Art Unit: 1775

Ruppi et al or Vuorinen et al discloses the claimed coating in between an alpha alumina layer.

Thus it would have been obvious to one of ordinary skill in the art to provide the claimed layer in-between the substrate and the alumina coating of Ishii et al, as these intermediate layers are known to provide improved bonding of the alumina layer, as shown by Ruppi et al or Vuorinen et al.

It would also been obvious to use other substrate like cBN, as these substrates are well known in the art to be used as tools.

9. Claims 14,21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishii et al (6,333,103) in view of Ruppi (6,689,450).

Ishii et al discloses the invention substantially as claimed except for the additional alumina layers.

Ruppi discloses the known use of more than one alumina layer.

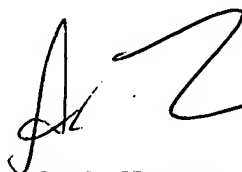
Thus it would have been obvious to one of ordinary skill in the art to include additional alumina layers in Ishii et al, as this ordering is known in the art to improve the performance of tools as shown by Ruppi.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Archene Turner whose new telephone number is (571) 272-1545. The examiner can normally be reached on Monday, Wednesday through Friday from 10:30 am. to 6:00 pm.

Art Unit: 1775

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on (571) 272-1540. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Please remember to include on the fax, the art unit 1775, serial number and Examiner's name.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to be 'A. A. Turner', with a long, sweeping horizontal line extending to the right.

**A. A. Turner**  
**Primary Examiner**  
**Group 1700**

aat